

§ 157.12a

162.050. Each oil content meter component of the monitoring system installed on a foreign vessel must be approved:

(1) Under 46 CFR part 162, subpart 162.050; or

(2) As meeting IMO Marine Environment Protection Committee resolution MEPC.108(49) by a country that has ratified the MARPOL 73/78. Paragraph 1.2.2 of MEPC.108(49) provides, as to equipment installed in “oil tankers the keels of which are laid, or which are at a similar stage of construction, before January 1, 2005,” for alternative compliance with IMO resolutions A.393(X), A.496(XII), MEPC.13(19), and A.586(14). These five resolutions are incorporated by reference (*see* § 157.02).

(c) Each oil discharge monitoring and control system on a U.S. vessel must be installed in accordance with §§ 157.12b through 157.12g of this part.

[USCG–2004–18939, 74 FR 3378, Jan. 16, 2009]

§ 157.12a Definitions.

As used in §§ 157.12a through 157.12g—

Control section means a unit in a monitoring system composed of the items specified in § 157.12d(a)(4)(viii).

Control unit means a device that receives automatic signals of oil content of the effluent ppm, flow rate of discharge m³/hour, ship’s speed in knots, ship’s position-latitude and longitude, date and time (GMT, Greenwich Mean Time), and status of the overboard discharge control. The control unit makes automatic recordings of data as specified in § 157.12d(h)(2).

Oil discharge monitoring and control system or *monitoring system* means a system that monitors the discharge into the sea of oily ballast or other oil-contaminated water from the cargo tank areas and comprises the items specified in § 157.12d(a)(4).

Overboard discharge control means a device that automatically initiates the sequence to stop the overboard discharge of the effluent in alarm conditions and prevents the discharge throughout the period the alarm condition prevails. The device may be arranged to close the overboard valves or to stop the relevant pumps, as appropriate.

PPM means parts of oil per million parts of water by volume.

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Starting interlock means a facility that prevents the initiation of the opening of the discharge valve or the operation of other equivalent arrangements before the monitoring system is fully operational when use of the monitoring system is required by the Convention.

[USCG–2004–18939, 74 FR 3379, Jan. 16, 2009]

§ 157.12b Implementation requirements.

Oil discharge monitoring and control systems must be fitted to oil tankers to which this subpart applies. A monitoring and control system must employ a control unit and be fitted with a starting interlock and overboard discharge control.

[USCG–2004–18939, 74 FR 3379, Jan. 16, 2009]

§ 157.12c Construction, maintenance, security, calibration, and training.

(a) The oil discharge monitoring and control system must be designed to ensure that user access is restricted to essential controls. Access beyond these controls must be available for emergency maintenance and temporary repair but must require the breaking of security seals or activation of another device, which indicates an entry to the equipment.

(b) The seals must be of a design that only the manufacturer or the manufacturer’s agent can replace the seals or reset the system following inspection and permanent repairs to the equipment.

(c) The accuracy of the monitoring system must be verified during International Oil Pollution Prevention certificate renewal surveys. The calibration certificate certifying date of last calibration check must be retained on board for inspection purposes.

(d) The monitoring system may have several scales as appropriate for its intended use. The recording device fitted to a meter which has more than one scale must indicate the scale which is in use.

(e) Simple means must be provided aboard ship to check on instrument drift, repeatability of the instrument reading, and the ability to re-zero the instrument.

(f) Ship staff training must include familiarization in the operation and the maintenance of the equipment.

(g) The routine maintenance of the monitoring system and troubleshooting procedures must be clearly defined in the Operating and Maintenance Manual. All routine maintenance and repairs must be recorded.

[USCG-2004-18939, 74 FR 3379, Jan. 16, 2009]

§ 157.12d Technical specifications.

(a) *Oil discharge monitoring and control system.* (1) The monitoring system must be capable of effectively monitoring and controlling the discharge of any effluent into the sea through those overboard discharge outlets permitted by § 157.11 that are necessary to fulfill the operational requirements of the oil tanker.

(2) The discharge of dirty ballast water or other oil-contaminated water from the cargo tank areas into the sea through outlets, which are not controlled by the monitoring system is prohibited.

(3) The monitoring system must function effectively under all environmental conditions normally encountered by oil tankers, and must be designed and constructed to satisfy the specifications for approval in 46 CFR subpart 162.050. Moreover—

(i) The system must be designed so a discharge of dirty-ballast or other oil-contaminated water from the cargo tank areas cannot take place unless the monitoring system is in the normal operating mode and the relevant sampling point has been selected;

(ii) The system should sample the effluent discharge from a minimum number of discharge outlets and be arranged so that discharge overboard can take place via only one outlet at a time;

(iii) Where it is intended that more than one line be used for simultaneous discharging purposes, one oil content meter, together with a flow meter, must be installed in each discharge line. These instruments must be connected to a common processor; and

(iv) To avoid alarms because of short-term high-oil-concentration signals (spikes) causing indications of high instantaneous rates of discharge, the short-term high ppm signal may be

suppressed for a maximum of 10 seconds. Alternatively, the instantaneous rate of discharge may be continuously averaged during the preceding 20 seconds or less as computed from instantaneous ppm values of the oil content meter readings received at intervals not exceeding 5 seconds.

(4) The monitoring system must comprise—

(i) An oil content meter to measure the oil content of the effluent in ppm. The meter must be approved in accordance with the provisions contained in 46 CFR subpart 162.050 and certified to take into account the range of cargoes carried;

(ii) A flow rate indicating system to measure the rate of effluent being discharged into the sea;

(iii) A ship speed indicating device to give the ship's speed in knots;

(iv) A ship position indicating device to give the ship's position-latitude and longitude;

(v) A sampling system to convey a representative sample of the effluent to the oil content meter;

(vi) An overboard discharge control to stop the overboard discharge;

(vii) A starting interlock to prevent the discharge overboard of any effluent unless the monitoring system is fully operational; and

(viii) A control section comprising—

(A) A processor that accepts signals of oil content in the effluent, the effluent flow rate, and the ship's speed, and computes these values into liters of oil discharged per nautical mile and the total quantity of oil discharged;

(B) A means to provide alarms and command signals to the overboard discharge control;

(C) A recording device to provide a record of data required under § 157.12d(h)(2);

(D) A data display to exhibit the current operational data required under § 157.12d(i);

(E) A manual override system to be used in the event of failure of the monitoring system;

(F) A means to provide signals to the starting interlock to prevent the discharge of any effluent before the monitoring system is fully operational; and